

**WHAT IS CLAIMED IS:**

1. A method for preparing a catalyst for partial oxidation of acrolein represented by the following Chemical Formula 1, comprising the steps of:

a) dissolving one or more kinds of metal salts selected from the group consisting of molybdenum, tungsten, iron, copper, strontium, bismuth, chrome, tin, antimony, potassium, an alkali earth metal, and a mixture thereof in water to prepare a catalyst suspension;

b) introducing a base solution and an acid solution into the a) catalyst suspension to control acidity of the catalyst suspension to 3.5 to 6.5;

c) contacting the b) catalyst suspension of which acidity is controlled with an inert support to support the catalyst thereon; and

d) drying and firing the c) supported catalyst:

[Chemical Formula 1]



wherein

Mo is molybdenum, W is tungsten, V is vanadium;

A is iron, copper, bismuth, chrome, tin, antimony, or

potassium;

B is an alkali earth metal; and

a, b, c, d, and e respectively represent the atomic ratio of each metal, and when a is 12, b is 1~5, c is 1~6, d is 1~5, and e is 0~3, and x is determined according to the oxidation state of each metal.

2. The method for preparing a catalyst for partial oxidation of acrolein according to claim 1, wherein in the a) catalyst suspension, the maximum particle size of the metal salts is 10  $\mu\text{m}$ .
- 10 3. The method for preparing a catalyst for partial oxidation of acrolein according to claim 2, wherein the b) base solution is a base solution of one or more kinds selected from the group consisting of ammonia, pyridine, methylamine, and ethyldiamine, or an organic base solution having 1~10 carbon atoms.
- 15 4. The method for preparing a catalyst for partial oxidation of acrolein according to claim 2, wherein the b) acid solution is an organic acid solution having 1~10 carbon atoms, and is one or more kinds selected from the group consisting of nitric acid, acetic acid, and citric acid.
- 20 5. A catalyst for partial oxidation of acrolein represented by the following Chemical Formula 1, which is prepared by introducing an acid solution and a base solution into a catalyst suspension prepared

by dissolving one or more kinds of metal salts selected from the group consisting of molybdenum, tungsten, iron, copper, strontium, bismuth, chrome, tin, antimony, potassium, and an alkali earth metal to control the acidity of the catalyst suspension to 3.5 to 6.5,  
5 contacting the catalyst suspension of which acidity is controlled with an inert support to support the catalyst thereon, and then drying and firing the supported catalyst:

[Chemical Formula 1]



10 wherein

Mo is molybdenum, W is tungsten, V is vanadium;

A is iron, copper, bismuth, chrome, tin, antimony, or potassium;

B is an alkali earth metal; and

15 a, b, c, d, and e respectively represent the atomic ratio of each metal, and when a is 12, b is 1~5, c is 1~6, d is 1~5, and e is 0~3, and x is determined according to the oxidation state of each metal.

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